

## **REMARKS**

### **I. INTRODUCTION**

Claims 1, 10 and 15 have been amended. The subject matter added to claims 1, 10 and 15 is disclosed in paragraphs [0018] and [0019] of the Specification and illustrated in Figure 1; therefore, it is respectfully submitted that new matter has been added. Claims 1-16 remain pending in the present application. In view of the above amendments and the following remarks, it is respectfully submitted that all of the pending claims are allowable.

### **II. CLAIM OBJECTIONS**

Claims 1 and 10 stand objected to because of various informalities. (See 12/7/10 Office Action, p. 2.) In view of the amendments to claims 1 and 10, it is respectfully submitted that these objections should be withdrawn.

### **III. CLAIM REJECTIONS – 35 U.S.C. § 102(b)**

Claims 1-16 stand rejected under 35 U.S.C. § 102(b) as anticipated by U.S. Patent 5,617,601 to McDougall (hereinafter “McDougall”), as evidenced by U.S. Patent 6,248,059 to Gamper et al. (hereinafter “Gamper”). (See 12/7/10 Office Action, pp. 2-9.)

Claim 1, as presently amended, recites “[a] system for joining an appliance body of an appliance to a driven member assembly, the appliance body having a driving assembly therein, the driven member assembly including a workpiece element having a torsional axis of movement, comprising: a plurality of joining assemblies removably attaching the driven member assembly to the appliance body, wherein the joining assemblies are each separate from the torsional axis of the workpiece element, wherein the joining assemblies each include a mating member on one of a) the appliance body and b) the driven member assembly and an associated receiving element on the other thereof, wherein the mating members and the receiving elements have such a configuration, respectively, and mate in such a manner that there is substantially no lost motion for the workpiece element during operation of the appliance and such that the driven

member assembly is readily removable from the appliance body upon application of an axial force, wherein the mating members comprise protrusions having a substantially cross-shaped cross-section, the receiving members comprise receptacles having a substantially cross-shaped cross-section, and the mating members are adapted to slidably engage with the receiving members, and wherein the mating of the mating members and the receiving members is an interference fit.”

Addressing the limitation “wherein the mating of the mating members and the receiving members is an interference fit,” the Examiner asserts that “the mating of the mating members 513 and the receiving members 515, 517 is an “interference fit” in (in the sense that there is still frictional contact between the mating members and the receiving members; col. 4, lines 55-67).” (12/7/10 Office Action, p. 4, citing McDougall, Fig. 10.) The Examiner acknowledges that “McDougall’s joining assemblies 513 and 515, 517 basically define a push-and-turn type connection or bayonet type arrangement.” (12/7/10 Office Action, p. 4, citing McDougall, Fig. 10.) However, the Examiner asserts that “a push-and-turn type connection or bayonet type arrangement is known to also be an interference fit, as evidenced by Gamper, as shown at joining element 68 and at joining end 26 (see Figs. 2 and 3, for example, and see col. 11, lines 44-49).” (12/7/10 Office Action, p. 4, citing Gamper, col. 11, ll. 44-49, Figs. 2, 3.)

The Applicant respectfully submits that the Examiner’s assertion is incorrect for two reasons. First, the Applicant believes Gamper misuses the term “bayonet”. Gamper states that “[t]he resulting interference between housing 16 and coupler 14 (as well shown in the cross sectional view of FIG. 3), and the subsequent bayonet type interference fit between element 68 and end 26, enable an effective controlled vacuum environment between pump 54 and the interior of vacuum chamber 12.” (Gamper, col. 11, ll. 44-49.) However, the Applicant respectfully submits that those of skill in the art will understand that a bayonet connection is one in which a male connecting part having one or more protruding pins is inserted into a female connecting part having one or more corresponding L-shaped slots, and then twisted in order to retain the pins within the slots. Gamper, however, includes neither pins on inserted element 68, nor slots on receiving end 26, nor is the connection therebetween accomplished by twisting. (See id., col. 11, ll. 38-49; Figs. 2, 2A, 3.) Because of this apparent misuse, the Applicant respectfully submits that Gamper is inappropriate for citation as to the general meaning of a bayonet connection.

Further, though the Applicant is unclear as to what Gamper means by a “bayonet type interference fit,” as the connection of Gamper is not a bayonet connection for the reasons described above, the Applicant believes that this may signify a connection accomplished by both the pins and L-shaped slots of a bayonet connection and the frictional attachment of an interference fit. This is not the type of connection used by McDougall; rather, the connection of McDougall is accomplished solely by means of a bayonet connection. (See McDougall, Fig. 10.) Notwithstanding the fact that there is some frictional contact between the mating members and receiving members of McDougall, as there is between all physical elements in contact with one another, such frictional contact is not the mechanism by which the mating members 513 and the receiving members 515 and 517 are maintained in position with respect to one another; nowhere does McDougall suggest that friction plays any role in maintaining this connection. (See id., *passim*.)

For the foregoing reasons, the Applicant respectfully submits that McDougall does not disclose “wherein the mating of the mating members and the receiving members is an interference fit,” as recited in claim 1. Accordingly, this rejection should be withdrawn. Because claims 2-9 depend from, and, therefore, include all of the limitations of claim 1, it is respectfully submitted that these claims are also allowable for at least the foregoing reasons.

Claim 10, as presently amended, recites “[a]n oral care appliance, comprising: an appliance body having a driving assembly therein; a driven member assembly which includes a workpiece element having a torsional axis of movement and wherein the workpiece element includes a brushhead; and a coupling structure for joining the appliance body to the driven member assembly, the coupling structure including a plurality of joining assemblies removably attaching the driven member assembly to the appliance body, wherein the joining assemblies are each separate from the torsional axis of the workpiece element, wherein each joining assembly includes a mating member from one of a) the appliance body and b) the driven member assembly and an associated receiving element in the other thereof, receiving said mating member, wherein the mating members and the receiving elements have such a configuration, respectively, and mate in such a manner that there is substantially no lost motion for the workpiece element during operation of the appliance, and such that the driven member assembly is readily removable from the appliance body upon application of an axial force, wherein the mating members comprise protrusions having a substantially cross-shaped cross-section, the receiving members comprise

receptacles having a substantially cross-shaped cross-section, and the mating members are adapted to slidably engage with the receiving members, and wherein the mating of the mating members and the receiving elements is an interference fit.”

The Applicant respectfully submits that McDougall does not disclose “wherein the mating of the mating members and the receiving elements is an interference fit,” as recited in claim 10, for the reasons discussed above with reference to claim 1. Accordingly, this rejection should be withdrawn. Because claims 11-14 depend from, and, therefore, include all of the limitations of claim 10, it is respectfully submitted that these claims are also allowable for at least the foregoing reasons.

Claim 15, as presently amended, recites “[a] brushhead-handle assembly of a power toothbrush in which a brushhead is joinable to and removable from a handle portion of the toothbrush by a plurality of joining assemblies, the joining assemblies being separate from a torsional axis of movement of a brushhead workpiece portion of the brushhead assembly, comprising: a brushhead assembly which includes a brushhead workpiece element, wherein the brushhead assembly includes a plurality of joining members which mate with associated second joining members in the handle portion to form joining assemblies, wherein the first joining members have such a configuration, relative to the configuration of the associated second joining members and mate therewith in such a manner that there is substantially no lost motion of the workpiece element during operation of the toothbrush and such that the brushhead assembly is readily removable from the handle portion of the toothbrush upon application of an axial force, wherein the mating members comprise protrusions having a substantially cross-shaped cross-section, the receiving members comprise receptacles having a substantially cross-shaped cross-section, and the mating members are adapted to slidably engage with the receiving members, and wherein the mating of the joining members and the second joining members is an interference fit.”

The Applicant respectfully submits that McDougall does not disclose “wherein the mating of the joining members and the second joining members is an interference fit,” as recited in claim 15, for the reasons discussed above with reference to claim 1. Accordingly, this rejection should be withdrawn. Because claim 16 depends from, and, therefore, includes all of the limitations of claim 15, it is respectfully submitted that this claim is also allowable for at least the foregoing reasons.

#### **IV. CLAIM REJECTIONS – 35 U.S.C. § 103(a)**

Claims 1-16 stand rejected under 35 U.S.C. § 103(a) as unpatentable over U.S. Pub. App. No. 2005/0050658 to Chan et al. (hereinafter “Chan”). (See 12/7/10 Office Action, pp. 9-18.)

Claim 1, as presently amended, recites “[a] system for joining an appliance body of an appliance to a driven member assembly, the appliance body having a driving assembly therein, the driven member assembly including a workpiece element having a torsional axis of movement, comprising: a plurality of joining assemblies removably attaching the driven member assembly to the appliance body, wherein the joining assemblies are each separate from the torsional axis of the workpiece element, wherein the joining assemblies each include a mating member on one of a) the appliance body and b) the driven member assembly and an associated receiving element on the other thereof, wherein the mating members and the receiving elements have such a configuration, respectively, and mate in such a manner that there is substantially no lost motion for the workpiece element during operation of the appliance and such that the driven member assembly is readily removable from the appliance body upon application of an axial force, wherein the mating members comprise protrusions having a substantially cross-shaped cross-section, the receiving members comprise receptacles having a substantially cross-shaped cross-section, and the mating members are adapted to slidably engage with the receiving members, and wherein the mating of the mating members and the receiving members is an interference fit.”

Addressing the limitation “wherein the mating of the mating members and the receiving members is an interference fit,” the Examiner asserts that “the mating of the mating members 1036 and the receiving members 1042 is deemed an “interference fit” in (in the sense that there is still frictional contact between the mating members 1036 and the receiving members 1042; paragraphs [0082] and [0083]).” (12/7/10 Office Action, p. 11, citing Chan, ¶¶ [0082], [0083], Fig. 13.) The Applicant respectfully submit that the Examiner’s assertion is incorrect; as was the case for McDougall, Chan describes projection members 1036 that fit into L-shaped slots 1042. (See Chan, ¶ [0082].) As described above, this type of joining is a bayonet connection. Nowhere does Chan state that friction plays any role in the connection of the projection members

1036 of the head and neck 1016 to the L-shaped slots 1042 of the handle 1012. (See Chan, ¶¶ [0082], [0083], *passim*.)

The Examiner further states that “[e]ven assuming *arguendo* that the mating of the mating members 1036 and the receiving members 1042 of the embodiment of Figs. 11-13 is not considered an interference fit”, it should be noted that Chan further teaches that numerous other well known engagement configurations including a friction fit or interference fit arrangement could well be used in the toothbrush (i.e., an appliance) with a removable head and handle (paragraph [0051]). Thus, given this explicit teaching by Chan, it would have been obvious to one of ordinary skill in the art to have simply substituted an interference fit mating arrangement for the mating arrangement as shown in the embodiment of Figs 11-13...” (12/7/10 Office Action, pp. 11-12, citing Chan, ¶ [0051].)

The Examiner is correct in noting that Chan states that “[o]ther engagement configurations can be used for providing a toothbrush having a removable head and handle” including “a friction fit arrangement.” (Chan, ¶ [0051].) However, those of skill in the art will understand that a wide variety of arrangements may be described as a friction fit or interference fit arrangement. Gamper describes and illustrates one such arrangement. (See Gamper, col. 11, ll. 44-49, Figs. 2, 2A, 3.) Thus, even if it is an obvious modification of the attachment arrangement in Figs. 11-13 of Chan to replace the bayonet arrangement with a friction fit arrangement (which the Applicant does not concede), the Examiner has presented no reason why the *specific arrangement recited in claim 1*, i.e., “a plurality of joining assemblies removably attaching the driven member assembly to the appliance body... wherein the joining assemblies each include a mating member on one of a) the appliance body and b) the driven member assembly and an associated receiving element on the other thereof... wherein the mating members comprise protrusions having a substantially cross-shaped cross-section, the receiving members comprise receptacles having a substantially cross-shaped cross-section, and the mating members are adapted to slidably engage with the receiving members, and wherein the mating of the mating members and the receiving members is an interference fit,” as opposed to any of the multitude of other possible friction fit arrangements. The Applicant respectfully submits that the assertion that it would have been obvious to use specifically this type of a friction fit arrangement, as opposed to any other, is merely conjecture on the part of the Examiner.

Therefore, it is respectfully submitted that this rejection should be withdrawn. Because claims 2-9 depend from, and, therefore, include all of the limitations of claim 1, it is respectfully submitted that these claims are also allowable for at least the foregoing reasons.

Claim 10, as presently amended, recites “[a]n oral care appliance, comprising: an appliance body having a driving assembly therein; a driven member assembly which includes a workpiece element having a torsional axis of movement and wherein the workpiece element includes a brushhead; and a coupling structure for joining the appliance body to the driven member assembly, the coupling structure including a plurality of joining assemblies removably attaching the driven member assembly to the appliance body, wherein the joining assemblies are each separate from the torsional axis of the workpiece element, wherein each joining assembly includes a mating member from one of a) the appliance body and b) the driven member assembly and an associated receiving element in the other thereof, receiving said mating member, wherein the mating members and the receiving elements have such a configuration, respectively, and mate in such a manner that there is substantially no lost motion for the workpiece element during operation of the appliance, and such that the driven member assembly is readily removable from the appliance body upon application of an axial force, wherein the mating members comprise protrusions having a substantially cross-shaped cross-section, the receiving members comprise receptacles having a substantially cross-shaped cross-section, and the mating members are adapted to slidably engage with the receiving members, and wherein the mating of the mating members and the receiving elements is an interference fit.”

The Applicant respectfully submits that Chan does not disclose or suggest “the coupling structure including a plurality of joining assemblies removably attaching the driven member assembly to the appliance body... wherein each joining assembly includes a mating member from one of a) the appliance body and b) the driven member assembly and an associated receiving element in the other thereof, receiving said mating member... wherein the mating members comprise protrusions having a substantially cross-shaped cross-section, the receiving members comprise receptacles having a substantially cross-shaped cross-section, and the mating members are adapted to slidably engage with the receiving members, and wherein the mating of the mating members and the receiving elements is an interference fit,” as recited in claim 10, for the reasons discussed above with reference to claim 1. Accordingly, this rejection should be withdrawn. Because claims 11-14 depend from, and, therefore, include all of the limitations of

claim 10, it is respectfully submitted that these claims are also allowable for at least the foregoing reasons.

Claim 15, as presently amended, recites “[a] brushhead-handle assembly of a power toothbrush in which a brushhead is joinable to and removable from a handle portion of the toothbrush by a plurality of joining assemblies, the joining assemblies being separate from a torsional axis of movement of a brushhead workpiece portion of the brushhead assembly, comprising: a brushhead assembly which includes a brushhead workpiece element, wherein the brushhead assembly includes a plurality of joining members which mate with associated second joining members in the handle portion to form joining assemblies, wherein the first joining members have such a configuration, relative to the configuration of the associated second joining members and mate therewith in such a manner that there is substantially no lost motion of the workpiece element during operation of the toothbrush and such that the brushhead assembly is readily removable from the handle portion of the toothbrush upon application of an axial force, wherein the mating members comprise protrusions having a substantially cross-shaped cross-section, the receiving members comprise receptacles having a substantially cross-shaped cross-section, and the mating members are adapted to slidably engage with the receiving members, and wherein the mating of the joining members and the second joining members is an interference fit.”

The Applicant respectfully submits that Chan does not disclose or suggest “[a] brushhead-handle assembly of a power toothbrush in which a brushhead is joinable to and removable from a handle portion of the toothbrush by a plurality of joining assemblies... wherein the brushhead assembly includes a plurality of joining members which mate with associated second joining members in the handle portion to form joining assemblies... wherein the mating members comprise protrusions having a substantially cross-shaped cross-section, the receiving members comprise receptacles having a substantially cross-shaped cross-section, and the mating members are adapted to slidably engage with the receiving members, and wherein the mating of the joining members and the second joining members is an interference fit,” as recited in claim 15, for the reasons discussed above with reference to claim 1. Accordingly, this rejection should be withdrawn. Because claim 16 depends from, and, therefore, includes all of the limitations of claim 15, it is respectfully submitted that this claim is also allowable for at least the foregoing reasons.



## CONCLUSION

In view of the foregoing, it is respectfully submitted that all of the currently pending claims are in condition for allowance. All issues raised by the Examiner having been addressed, an early and favorable action on the merits is earnestly solicited.

Respectfully submitted,

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